

Amendments to the Claims

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently amended) An optical connector for connecting an input optical component to an output optical component, comprising:

a three-dimensional optically-transmissive bulk dielectric for abutment with an input connection face of the input optical component and an output connection face of the output optical component, the three-dimensional bulk dielectric having a bulk refractive index; and

a connection path optically written within the three-dimensional bulk dielectric for connecting the input connection face to the output connection face, the connection path being defined substantially throughout its length by a modified refractive index different from the bulk refractive index.

2. (Original) The optical connector of claim 1, wherein the three-dimensional bulk dielectric is a glass block.

3. (Original) The optical connector of claim 1, wherein the three-dimensional bulk dielectric is a prism.

4. (Cancelled)

5. (Cancelled)

6. (Currently amended) The optical connector of claim [4] 3, wherein the waveguide connection path is profiled to minimize transmission losses at the input and output connection faces.

7. (Original) The optical connector of claim 1, wherein the connection path is a straight through path.

8. (Previously presented) The optical connector of claim 1, wherein the connection path is a bent connection path.

9. (Original) The optical connector of claim 8, wherein the bent connection path is a bent waveguide.

10. (Original) The optical connector of claim 9, wherein bent waveguide is profiled to minimize transmission losses at a bend.

11. (Original) The optical connector of claim 8, wherein the bent connection path includes two substantially orthogonal waveguides disposed within the bulk dielectric to permit total internal reflection from one of the two waveguides to the other.

12. (Original) The optical connector of claim 11, wherein the two waveguides intersect at a polished surface of the bulk dielectric.

13. (Original) The optical connector of claim 8, wherein the bent connection path includes two substantially orthogonal waveguides interconnected by a photonic crystal structure.

14. (Previously amended) The optical connector of claim 1, having a plurality of connection paths optically written within the bulk dielectric for connecting an array of discrete input optical components to an array of discrete output optical components.

15. (Original) A stacked optical connector assembly, comprising a plurality of optical connectors according to claim 14 stacked to form the connector assembly.

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Canceled)

22. (Canceled)

23. (Canceled)

24. (Canceled)

25. (Canceled)

26. (Canceled)

27. (Canceled)

28. (Canceled)